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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,121	05/23/2006	Alexander Deiters	54-000251US	2506

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EXAMINER	
GEBREYESUS, KAGNEW H	
ART UNIT	PAPER NUMBER
1656	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/561,121	DEITERS ET AL.	
	Examiner	Art Unit	
	Kagnew H. Gebreyesus	1656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-61* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

I. Claims 1-8, 14, 18-20, 23-25, 60 and 61drawn to a composition comprising a protein wherein the protein comprises at least one unnatural amino acid and at least one post-translational modification, wherein the at least one post-translational modification comprises attachment of a molecule comprising a second reactive group by a (3+2) cycloaddition to the at least one unnatural amino acid comprising a first reactive group.

II. Claims 9-13 are drawn to a composition comprising an unnatural amino acid having the chemical structure found in figure 9.

III. Claim 15 is drawn to a cell comprising an unnatural amino acid .

IV. Claims 16 and 17 are drawn to a composition comprising an azido dye.

V. Claims 21 and 22 are drawn to a composition comprising an alkynyl polyethylene glycol.

VI. Claims 26 and 27 are drawn to a method for synthesizing a p- (proparglyoxy) phenylalanine compound, the method. .

VII. Claims 28-30 are drawn to a method for synthesizing an azido dye, the method comprising: providing a dye compound comprising a sulfonyl halide moiety. .

VIII. Claims 31-35 are drawn to a method for synthesizing an azido dye, the method comprising: providing an amine-containing dye compound.

IX. Claims 36-39 are drawn to a method for synthesizing a propargyl amide polyethylene glycol, the method comprising: reacting propargylamine with polyethylene glycol (PEG)-hydroxysuccinimide ester in an organic solvent at room temperature.

X. Claims 40 and 41 are drawn to a eukaryotic cell comprising an orthogonal aminoacyl-tRNA synthetase (O-RS), wherein the O-RS preferentially aminoacylates an orthogonal RNA (O-tRNA) with at least one unnatural amino acid in the eukaryotic cell.

XI. Claims 42, 43 and 45 are drawn to a polypeptide selected from the group consisting of a polypeptide that comprises an amino acid sequence as shown in any one of SEQ ID NO.: 48-63. .

XII. Claims 44 and 46 are drawn to an antibody or anti-sera specifically immuno-reactive with the polypeptide selected from the group consisting of a polypeptide that comprises an amino acid sequence as shown in any one of SEQ ID NO.: 48-63.

XIII. Claims 47-51 are drawn to a polynucleotide selected from the group consisting of SEQ ID NO: 20-35.

XIV. Claims 52-59 are drawn to a method of producing in a eukaryotic cell at least one protein comprising at least one unnatural amino acid using an ORS selected from the group SEQ ID NO: 48-53.

The special technical feature linking the inventions in Groups I-XIV first mentioned is a composition comprising a protein wherein the protein comprises at least one unnatural amino acid and at least one post-translational modification, wherein the at least one post-translational modification comprises attachment of a molecule comprising a second reactive group by a (3+2) cycloaddition to the at least one unnatural amino acid comprising a first reactive group.

However Wang et al teach producing a labeled protein comprising attaching a first reactive group (alkynyl or a complementary azido group) to lysine or cysteine residues on the coat protein of cowpea mosaic virus (CPMV) and further reacting this group with fluorescien derivatives containing a second reactive group (a complementary azido or alkynyl group) in a [3+2] cycloaddition reaction to produce a labeled CPMV coat proteins (see page 3192 3rd paragraph).

Therefore the technical feature linking the inventions in groups I-XIV is not a special technical feature as it does not provide a contribution over the prior art as defined under PCT Article 33.1

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim

is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

If applicants elect the inventions in group I or XIV applicants must also elect the unnatural amino acid from the group selected from an alkynyl or azido moiety and the post translational modification selected from the group of molecules in claim 2.

In addition if applicants elect the invention of group XI , XII or XIV they must also elect a single species of polypeptide from the group selected from the group SEQ ID NO: 48-63. Furthermore if applicants elect the invention in group XIII, they must elect one species from the group selected from SEQ ID NO: 20-35.

The species in the group **I** and **XIV** are related because they are all ORS proteins comprising at least one unnatural amino acid with a specific post translational modification. However each ORS is structurally distinct from the other. In addition the inventions in group **XI** and **XII** are related because they are all RS polypeptides or antibodies specific to the same. However each ORS or antibodies is structurally distinct from the other and are not obvious variants. Therefore, where structural identity is

required, or expression using said polynucleotides or production of antibodies using polypeptides, the different sequences have different effects.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, all the claims are generic.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.43).

Applicant is reminded that upon the cancellation of claims to a none elected invention the none elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48 (b) and by the fee required under 37 CFR 1.17 (i).

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or**

otherwise include all the limitations of the patentable product will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai, In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kagnew H. Gebreyesus whose telephone number is 571-272-2937. The examiner can normally be reached on 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Kerr Bragdon can be reached on 571-272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kagnew H Gebreyesus Ph.D/
Examiner, Art Unit 1656
4/14/08.

/Robert B Mondesi/
Primary Examiner,
Art Unit 1652